

Invoking member function in inheritance

| Function type Invoked through | Non-virtual | Virtual |
|----------------------------------|--|--|
| Object variable | <p style="text-align: center;">Class type of object variable determine which version of the function (static binding)</p> <pre>One one; one.print(); // One::print() Two two; two.print(); //Two::print() one=two; one.print(); // One::print()</pre> | <p style="text-align: center;">Class type of object variable (static binding)</p> <pre>One one; one.print(); // One::print() Two two; two.print(); //Two::print() one=two; one.print(); // One::print()</pre> |
| Pointer variable | <p style="text-align: center;">Class type of pointer variable (static binding)</p> <pre>One *onePtr = new One; onePtr->print(); // One::print() onePtr = new Two; onePtr->print(); // One::print()</pre> | <p style="text-align: center;">Class type of pointee (dynamic binding)</p> <pre>One *onePtr = new One; onePtr->print(); // One::print() onePtr = new Two; onePtr->print(); // Two::print()</pre> |
| Passed by value | <p style="text-align: center;">Class type of parameter (static binding)</p> <pre>TestPrint(One one){ one.print(); }</pre> <pre>One one; TestPrint(one); // One::print() Two two; TestPrint(two); //One::print() one=two; TestPrint(one); //One::print()</pre> | <p style="text-align: center;">Class type of parameter (static binding)</p> <pre>One one; TestPrint(one); // One::print() Two two; TestPrint(two); //One::print() one=two; TestPrint(one); //One::print()</pre> |
| Passed by reference | <p style="text-align: center;">Class type of parameter (static binding)</p> <pre>TestPrint(One &one){ one.print(); }</pre> <pre>One one; TestPrint(one); // One::print() Two two; TestPrint(two); // One::print() one=two; TestPrint(one); //One::print()</pre> | <p style="text-align: center;">Class type of parameter (dynamic binding)</p> <pre>One one; TestPrint(one); // One::print() Two two; TestPrint(two); //Two::print() one=two; TestPrint(one); // One::print()</pre> |
| Pointer parameter | <p style="text-align: center;">Class type of parameter (static binding)</p> <pre>TestPrint(One *onePtr){ onePtr->print(); }</pre> <pre>One *onePtr = new one; TestPrint(onePtr); // One::print() onePtr = new Two; TestPrint(one); // One::print() Two *twoPtr = new Two; TestPrint(twoPtr); //One::print()</pre> | <p style="text-align: center;">Class type of pointee (dynamic binding)</p> <pre>One *onePtr = new One; TestPrint(onePtr); // One::print() onePtr = new Two; TestPrint(one); // Two::print() Two *twoPtr = new Two; TestPrint(twoPtr); //Two::print()</pre> |